



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO038332	TWM001-VU	1	1	Net 30	M4130NT0.750W.049	4130 Round Tube .750 X .049W : MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361/6362 6373/6374 receive ft				100	11/20/2017	96		S010523	Stock	11/16/2017	\$ 6.00 / ft	0		\$574.01	TW Metals
Total:										100		96								\$574.01	

Plex 11/16/2017 9:23 AM Dart Plouffe Sonia

Status: Receiving

Part: **M4130NT0.750W.**

Created: 11/16/17 9:22 AM DART.PLOUFFE.S



Serial No: **S010523**



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO038332

Supplier: TWM001-VU
TW Metals
PO Box 933014
Atlanta, GA 31193-3014 USA
Phone: 585 768 5600
Fax: 585 768 5601

PO No: PO038332
PO Date: 11/10/17
Due Date: 11/20/17
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

E-MAILED
NOV 10 2017

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	M4130NT0.750W.049	-	4130 Round Tube .750 X.049W : MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361/6362 6373/6374 receive ft		Firmed	11/20/17	100 ft	0 ft	100 ft	\$6.00/ft	\$600.00
2	M304P0.675W.091	-	304/316 Pipe .675 OD x .091 Wall Thickness : MATERIAL: TP304/TP316 STAINLESS STEEL SEAMLESS PIPE AS PER ASTM A312/ASME SA312 receive ft		Firmed	11/20/17	20 ft	0 ft	20 ft	\$5.00/ft	\$100.00
Grand Total:											\$700.00

Handwritten:
95.668 ft 579
SP 11-16

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/10/17 1:56 PM dart.lavoie.chantal



O'Neal High-Performance Metals Group



**Packing
Slip**

ORDER NO.: 60643887

FROM: CRAN

PAGE 1

CUST NUMBER: 1203820 NET WGT: 35.083 REQ.DATE: 11/17/17 CONFIRMED
SOLD TO: SHIP TO:
DART AEROSPACE LTD DART AEROSPACE LTD
1270 ABERDEEN ST 1270 ABERDEEN ST
HAWKESBURY ON HAWKESBURY ON
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 11/13/17
TERMS: NET 30 DAYS VIA: COMMON CARRIER
F.O.B.: SHIPPING POINT FREIGHT: PREPAID
CUST ORD NO.: PO038332 RELEASE NO.:
RECEIVING PHONE:

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
0001	33047 CDS 4130 6736	3/4 X .049	17/24 FT

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	100.000 FT	95.668 FT	95.668 FT	35.083	

** 1 TEST REPORTS REQUIRED **

** 1 CERTS REQUIRED **

ECCN: 9A991.d Export License: NLR Expiration Date: 0/00/00
PO:49368990 HT:602196 PC: 4 CUSTOMER QTY: UOM
MLT:GERMANY MFG:GERMANY SLB/CL:1637185

BROKERS KUEHNE AND NAGEL LTD

AREA	TYPE OF PKG	PKGS	GRS WEIGHT	WIDTH	LENGTH	HGHT
NEW PEN CARTON		1.000	60.083	3.0000	293.0000	3
Orders In Package - 1		Box No -	TWPK17008758			
		1.000	60.083			

BY: Tom Weaver
RT 000-

UNLOAD TYPE: NONE SPECIFIED

DATE SHIPPED _____

DATE FILLED _____

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL
REVIEW.
<http://www.twmetals.com/invoice-terms.html>



O'Neal High-Performance Metals Group



**Packing
Slip**

ORDER NO.: 60643887

FROM: CRAN

PAGE 2

CUST NUMBER: 1203820 NET WGT: 35.083 REQ.DATE: 11/17/17 CONFIRMED
SOLD TO: SHIP TO:
DART AEROSPACE LTD DART AEROSPACE LTD
1270 ABERDEEN ST 1270 ABERDEEN ST
HAWKESBURY ON HAWKESBURY ON
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 11/13/17
TERMS: NET 30 DAYS 27 ENGLEHARD DRIVE
F.O.B.: SHIPPING POINT MONROE TWP NJ 08831
CUST ORD NO.: PO038332
VIA: COMMON CARRIER
FREIGHT: PREPAID
RELEASE NO.:
RECEIVING PHONE:

"TW Metals MSDS data is available on our web site at www.twmetals.com. MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

"CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Authorized Test Report Clerk *Corn Hanner* Date: 11/10/17

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL
REVIEW.
<http://www.twmetals.com/invoice-terms.html>

Benteler Stahl/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49.5254.81-0 Fax: +49.5254.13556

BENTELER

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1
EN 10204-2005-01

Benteler Stahl/Tube GmbH - Postfach 1340 - 33043 Paderborn - Deutschland

TW Metals:
The Aboretum, Suite 204
780 Constitution Drive
EXTON PA 19341
USA

Dokument-Nr.: 41-1013940/001/Z

Document No.:
No. du document:

Kunden-Bestell-Nr.:
Purchase Order No.:
No. de commande du client:

Benteler Auftrags-Nr.:
Benteler Order No.:
No. de commande Benteler:

Versandanzuweisung-Nr.:
Dispatch Note No.:
No. d'avis d'expédition:

Produkt: NAHTLOSE STAHLROHRE
Product: SEAMLESS STEEL TUBES
Produit: TUBES D'ACIER SANS SOUDURE

AMS-T-6736B-08 Type 1, ASTM-A 519-2006, MIL-T-6736B Type 1, AMS6360 Rev. M, AMS 2301K

Lieferbedingungen:
Terms of delivery:
Conditions de livraison:

Maße - Toleranzen:
Dimensions-tolerances:
Dimensions-tolérances:

AMS 2253E-83, Aircraft Type, Seamless, Cold Finished

Grade 4130

Stahlsorte:
Steel grade:
Nuance d'acier:

Condition N

Lieferzustand:
Delivery condition:
État de livraison:

FSD: BENTELER AMS6360M-AMS-T-6736.B 1-MIL-T-6736.B 1-AMS 2301K 4130 Condition N HEAT-NO.
CD AQ'S DIMENSIONS WA/GERMANY

Produktkennzeichnung:
Product marking:
Marquage du produit:

AEZ = Arczelenbeschriftung, Etching ink marking, Graure à l'encre
coûleur, LK = Laserkennzeichnung, Laser marking, Marquage laser
AZ = Arczelenbeschriftung, Etching ink marking, Graure à l'encre
coûleur, LK = Laserkennzeichnung, Laser marking, Marquage laser

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Page:

Hersteller:
Manufacturer:
Producteur:
Herstellerzeichen:
Manufacturer's brand:
Marque du producteur:



Stempel des Abnahmebeauftragten:
Stamp of the inspection representative:
Roiçon du contrôleur:

Stahlschweißverfahren:
Steel making process:
Procédé d'élaboration de l'acier:

AMS-T-6736B-08 Type 1, ASTM-A 519-2006, MIL-T-6736B Type 1, AMS6360 Rev. M, AMS 2301K



AS

Benteler Steel/Tubes GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49 5254 81-0 Fax: +49 5254 13868

BENTELER

Steel/Tube

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Prüf-Nr.:
Inspection No.:
No. du certificat:

41-1013940/001/Z

Dokument-Nr.:
Document No.:
No. du document:

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Pos.	Stück	Maße	Gesamtlänge	Gewicht	Schmelzen-Nr.	Prüfdruck	Rohr-Nr.-Gruppe	Vielfachlängen
Item	Number	Dimensions	Length total	Weight	Heat No.	Test pressure	Tube number group	Multiple lengths
Poste	Nombre	Dimensions	Longueur totale	Poids	No. de coulée	Pression d'épreuve	Série de no. des tubes	Longueurs multiples
0008	120	0.750" O.D. * 0.049" WT 20 FT - 24 FT	2874,02	1049	602196			
0008	120	0.750" O.D. * 0.049" WT 20 FT - 24 FT	2877,95	1054	603839			

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée [%]

Pos.	Schmelzen-Nr.	C	SI	MN	P	S	CR	MO	NI	CU
Item	Heat No.									
Poste	No. de coulée									
0008	602196	0,220	0,260	0,55	0,006	0,001	0,89	0,18	0,09	0,12
0008	603839	0,320	0,270	0,54	0,008	0,003	0,88	0,17	0,10	0,12

Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

Pos.	Schmelzen-Nr.	C	SI	MN	P	S	CR	MO	NI	CU
Item	Heat No.									
Poste	No. de coulée									
0008	602196	0,310	0,280	0,56	0,009	0,001	0,89	0,19	0,09	0,17
0008	603839	0,320	0,270	0,54	0,009	0,003	0,88	0,17	0,09	0,11

Prüfergebnisse / Test results / Résultats des essais

Die Rohre wurden zerstörungsfrei geprüft: The tubes are non destructive tested: Les tubes ont passé un essai non destructif:	ET-test: acc. to ASTM-A 450; ET - Test method: acc. to ASTM-E 309; for imperfections; ET-test: ET with rotating pancake coils; according to EN 10246-3; imperfections; Notch depth: 0,30 mm; notch width < = notch depth; notch length min. 2 x transducer width (max. 50 mm)	PASSED
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Augensichtkontrolle: Visual inspection: Examen visuel:	Materialeverwechslungsprüfung: Material conformity test: Vérification de la numérotation:	PASSED	Maßkontrolle: Dimensions examination: Vérification des dimensions:	PASSED
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TW METALS
REPORTS
TEST
AUG 02 17
ACCEPTED BY

AK6

Benteler Steel/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49-5254-81-0 Fax: +49-5254-13666

BENTELER

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

41-1013940/001/Z

Prüf-Nr.:
Inspection No.:
No. du certificat:

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Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

Die Probenahme erfolgte an Vielfachlängen.
The sampling was carried out on multiple lengths.
L'échantillonnage était réalisé aux longueurs multiples.

Zugversuch längs bei RT, Vollprobe / Tensile test longitudinal at RT, Full section test specimen / Essai de traction longitudinale à TA, Eprouvette: a section complete

Pos.	Proben-Nr.	Schmelz-Nr.	Probenabmessung	Streckgrenze	Zugfestigkeit	Dehnung
Item	Specimen No.	Heat No.	Specimen dimensions	Yield strength	Tensile strength	Elongation
Poste	No. de l'éprouv.	No. de coulée	Dimensions de l'éprouv.	Limite élastique	Résistance à la traction	Allongement
Anforderungen			mm	Rp 0,2 %	Rm	A2"
Requirements				KSI	KSI	%
Exigences				MIN 75	MIN 95	MIN 12,00
0008	000001	602196	19,05 X	1,25	130	18,00
0008	000002	602196	19,05 X	1,25	131	18,00
0008	000003	602196	19,05 X	1,25	130	16,00
0008	000001	603839	19,05 X	1,25	130	18,00
0008	000002	603839	19,05 X	1,25	131	18,00
0008	000003	603839	19,05 X	1,25	130	16,00

1. Formel
1. Formula
1. Formule

Randentkohlung / Surface decarburization / Décarburation superficielle

Pos. / Item / Poste: 0008

acc. to AMS-6360, partial decarburization: outside max. 0.009 in, partial decarburization inside max. 0.008 in, partial decarburization outside and inside max. 0.012 in, partial decarburization outside and inside max. 0.305 mm, without total decarburization; partial decarb. out. max.: 0,229 mm; partial decarb. ins. max.: 0,229 mm

Vermerk / Remark / Remarque

Pos. / Item / Poste: 0008

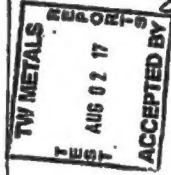
Certificate remarks: The steel grade corresponds to MIL-T-6736B, AMS 6360M, material free from mercury contamination, FAR BAA: 52.225-1 CANNOT COMPLY, DFARS BAA: 252.225-7001 CAN COMPLY, FAR TAA: 52.225-5 CAN COMPLY, No weld repair has been carried out, Country of origin of the material and heat: Germany, Aircraft quality steel acc. to AMS 2301K; see appendix page 1 of 1

Pos. / Item / Poste: 0008

Macroscopic examination: acc. to ASTM-E 381

Pos. / Item / Poste: 0008

Magnetic particle inspection: acc. to AMS 2301K/ASTM-E 1444, on prematerial



AS

AS

Benteler Steel/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49.5254.81-0 Fax: +49.5254.13866

BENTELER

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Pos. / Item / Poste: 0008

Grain size: acc. to ASTM-E 112; Grain size and finert 5; Grain size: longitudinal structure micrography, on prematerial

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Dokument-Nr.:
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Inspection No.:
No. du certificat:

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Verkäufer(in) / Sales Personnel / Personne chargée : Mr Schwarz, Tel.: 05254 81-204311, Fax: 204391

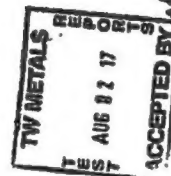
Paderborn Schloss Neuhaus, 30.06.2017, TEL.: 05254.81-201767 FAX: 05254.81-201752

Abnahmebeauftragter
Inspection representative

Contrôleur

I. A. THOMAS GOLLAN / TEM

Es wird bestätigt, dass die gelieferten Erzeugnisse den techn. Lieferbedingungen des Auftrages entsprechen. Dieses Dokument wurde mittels EDV erstellt und ist ohne Unterschrift rechtskräftig.
We certify that the supplied products comply with the order specification. This document was prepared by means of electronic data processing and is valid without signature.
Nous attestons que les produits livrés sont conformes aux stipulations de la commande. Ce document a été établi par traitement électronique de l'information et est valide sans signature.



AK

Benteler SteelTube GmbH
Reisendorferstraße 1
33104 Paderborn
Germany
Tel: +49 5254 81-0 Fax: +49 5254 13666

BENTELER
Steel/Tube

Abnahmeprüfzeugnis EN 10204-3.1 / Anhang
Inspection Certificate EN 10204-3.1 / appendix
Certificat de réception EN 10204-3.1 / appendice

Dokument-Nr.
Document No.:
No. de document:

41-1013940/001/Z

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Page: 1 of 1
Page: de

Halbzeuguntersuchung: Stahlsorte 4130 / Semi finished product examination: grade 4130 / Produit semi-fini nuance 4130

Schmelz-Nr. Heat No. Coulée No.	Position Item Poste	Korngröße Grain size Grossueur de grain (ASTM-E 112)	Härtebarkeit (min. Anforderungen) Hardenability (min. requirements) Trempeabilité (exigence min.) (ASTM-A 255)		Magnetpulverprüfung Magnetic particle inspection Essai à la poudre magnétique (AMS 2301 K/ASTM- 1444)	Makroätzung Macrofracture test Essai de macrofracture (ASTM-E 381)
			J(6/16") min. 35 HRC	J(8/16") min. 28 HRC		
602198	008	9	44	34	0,020	0,015
Decarburization Depth		Outside 0,000 mm	Inside 0,000 mm		S 2	R 1
603839	008	9	38	31	0,020	0,020
Decarburization Depth		Outside 0,000 mm	Inside 0,000 mm		S 2	R 1
					max. S 2.	max. R 1
						max. C 2

Der Stahl ist frei von Quecksilberverunreinigungen. / The steel is free of mercury contamination. / L'acier est libre des contaminations de mercure.

Paderborn Schloss Neuhaus, 30.06.2017
Tel.: (0)5254.81-201760 Fax: (0)5254.81-201752

Abnahmebeauftragter
Inspection representative
Contrôleur

Thomas Gollan



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